

SAM projects status

Robert Illingworth

29 August 2012

SAMWeb motivations

- Original SAM used CORBA for client/server communication
 - Reasonable choice 15 years ago, but...
 - Complicated
 - Inflexible and inextensible interfaces
 - Clients require large libraries to use
- Technology moves on
 - HTTP basis for a standardized, flexible protocol
 - Clients built in to almost all languages
 - Off the shelf solutions for caching, load balancing, etc
 - Use of SAM by IF experiments gives us opportunity to transition to new system

SAMWeb status

- Sufficient interfaces to access files (“run projects”) implemented
 - Initially just a bridge to CORBA
 - Just added to Minerva job submission (by Dennis Box).
The same implementation should work for NOvA
- Long term objective is to remove CORBA entirely
- Currently working on implementing remaining user interfaces as direct, non-bridged
 - New file query functionality deployed for NOvA. Will switch Minerva to it soon
- Provide web browser interface for querying

NOvA Monte Carlo Dataset Definition Editor

http://samweb.fnal.gov:8480/sam/nova/dev/definition_editor/mc_datasets.html

Apple Yahoo! Google Maps YouTube Wikipedia News (894) Popular

NOvA Simulation Dataset Definition Editor

This page is designed to allow you to define your own custom data sets based on the current NOvA Monte Carlo data files that have been generated. To access the raw data or processed data set pages follow these links:

[Raw Data Files and Sets](#)
[Processed \(Reco\) Data Files and Sets](#)

For more information on creating and using custom data sets see:
[SAM Data Sets Wiki](#)

Monte Carlo Selection Criteria

Previously Defined Data Sets:

Show List of Defined Datasets Group/User: nova

Add Dataset Reference (To start with a previously defined dataset)

Monte Carlo		Add Data Tier
&& Run Start Time	= to	Add Date Range
&& Run Number	=	Run/Subrun Selection
&& Trigger Stream	= NuMI	Trigger Selection
&& Detector	= NDOS	Detector Selection
&& Generator	= Cosmics	Generator Selection
&& Horn Polarity	= Forward Horn Current (Neutrinos)	Horn Selection
&& v Type	= v _μ	Horn Selection
&& v Interaction	= Charged Current	Int. Selection
&& No. Spills	>	Add Event Selection
&& GDML Geom File	=	Geometry Selection (Example: Geometry/gdml/ndos.gdml)
&& Job FHCL File	=	FHCL Selection (Example: cosmics_ndos_10000_r1_99.fcl)

Clear Query (Date format: 2011-05-09 or Date/Time format: 2011-05-09T23:46:04)

File Transfer System

- Started as NOvA project to handle cataloguing and uploading of raw data from online system to disk and tape
 - Deployed at near detector for over a year
- Far detector functionality (forwarding files to intermediate location) tested, but not yet deployed
- Extending it to handle offline files
 - Files can be dropped in a directory; FTS will catalogue the metadata and copy the file to the appropriate disk and tape locations

FTS Status - novadaq-ctrl-datadisk-02.fnal.gov

http://novadaq-ctrl-datadisk-02.fnal.gov:8888/fts/status

FTS status for novadaq-ctrl-datadisk-02.fnal.gov

Generated at 2012-08-29 00:19:34 CDT ([refresh](#))

Summary

FTS: OK	FSS: OK	Stager: OK
---------	---------	------------

Completed files:	15943
Failed transfers:	0
All error files:	151
Pending files:	94
New files:	0

- Recent completed transfers

Time	File name	Destination
raw		
2012-08-28 23:36:54 CDT	ndos_r00014079_s03_t02.raw	novadata:/nova/data/rawdata/NDOS/000140/14079/02
2012-08-28 23:36:53 CDT	ndos_r00014079_s03.raw	novadata:/nova/data/rawdata/NDOS/000140/14079/all
2012-08-28 23:00:30 CDT	ndos_r00014079_s00_t02.raw	/pnfs/nova/rawdata/NDOS/runs/000140/14079
2012-08-28 23:00:30 CDT	ndos_r00014079_s00.raw	/pnfs/nova/rawdata/NDOS/runs/000140/14079
2012-08-28 23:00:30 CDT	ndos_r00014079_s01_t02.raw	/pnfs/nova/rawdata/NDOS/runs/000140/14079
2012-08-28 23:00:30 CDT	ndos_r00014079_s02_t02.raw	/pnfs/nova/rawdata/NDOS/runs/000140/14079
2012-08-28 23:00:30 CDT	ndos_r00014079_s01.raw	/pnfs/nova/rawdata/NDOS/runs/000140/14079
2012-08-28 23:00:30 CDT	ndos_r00014079_s02.raw	/pnfs/nova/rawdata/NDOS/runs/000140/14079
2012-08-28 22:36:54 CDT	ndos_r00014079_s02_t02.raw	novadata:/nova/data/rawdata/NDOS/000140/14079/02
2012-08-28 22:36:53 CDT	ndos_r00014079_s02.raw	novadata:/nova/data/rawdata/NDOS/000140/14079/all

FTS plans

- Although written for NOvA, mostly generic SAM functionality
 - Useable by any experiment that uses SAM
 - Metadata extraction requires customization
 - Plan to benefit from ART functionality to have fully self-describing files
- Implemented using SAM CORBA interface
 - Intend to rewrite using web interface; totally transparent to users